## Amendments to the Claims:

In this continuation application, please cancel all remaining claims (Claims 1-12 and 27-35) now pending in parent application Serial No. 09/532,001 and insert the new claims provided below. This listing of claims will replace all prior versions, and listings, of claims in the application.

## Listing of the Claims

Claims 1-12 and 27-35. (cancelled)

Claims 13-26 (previously cancelled)

- 36. (New) A method of monitoring renal tubular epithelial differentiation comprising:
  - a) isolating at least one cell
  - b) placing said cell into a rotating wall vessel containing a cell culture comprising culture media and culture matrix; and
  - c) monitoring expression of greater than one gene in an array, wherein the expression of said genes is indicative of differentiated renal tubular epithelial cells.
- 37. (New) The method of claim 27, wherein said gene is selected from the group consisting of 1-α-hydroxylase, megalin, cubulin, erythropoietin, manganese super oxide dysmutase, interleukin-1β, a GABA transporter gene, β actin, villin, extracellular calcium sensing receptor, ICAM, VCAM, and γ-glutamyl transferase.
- 38. (New) The method of claim 27, wherein expression of a gene is increased.
- 39. (New) The method of claim 29, wherein said gene is selected from the group consisting of 1-α-hydroxylase, megalin, cubulin, erythropoietin, manganese super oxide dysmutase, interleukin-1β, a GABA transporter gene, β actin, villin, extracellular calcium sensing receptor, ICAM, VCAM, and γ-glutamyl transferase.
- 40. (New) The method of claim 27, wherein expression of a gene is decreased.
- 41. (New) The method of claim 31, wherein said gene is selected from the group consisting of 1-α-hydroxylase, megalin, cubulin, erythropoietin, manganese super oxide dysmutase,

- interleukin-1 $\beta$ , a GABA transporter gene,  $\beta$  actin, villin, extracellular calcium sensing receptor, ICAM, VCAM, and  $\gamma$ -glutamyl transferase.
- 42. (New) A method of producing active renal epithelial cells comprising:
  - a) isolating renal stem cells; and
  - b) culturing said cells in a rotating wall vessel containing a cell culture comprising culture media and culture matrix.
- 43. (New) The method of claim 34 wherein shear-stress response is reduced by the addition of a transcription factor decoy oligonucleotide encoding a shear-stress response element specific sequence.
- 44. (New) A method of producing active 1,25-dihydroxy vitamin D3 comprising:
  - a) isolating at least one cell;
  - b) placing said cell into a rotating wall vessel containing a cell culture comprising culture media and culture matrix; and
  - c) inducing 1,25-dihydroxy vitamin D3 production.